

IMAGING SYSTEM WITH BUILT-IN DIAGNOSTICS

ABSTRACT OF THE DISCLOSURE

5 An imaging system with built-in diagnostics and preferably implemented as an integrated system-on-a-
chip (SOC) imaging system. According to one implementation of the present invention, the imaging system
can be operated in two operating modes: a normal operating mode and a special diagnostic mode. While
running in the diagnostic mode, the imaging system can be configured to detect manufacturing defects. The
imaging system can be further configured to compensate for certain types of manufacturing defects. While
10 running in the diagnostic mode, the imaging system (1) identifies pixels that function incorrectly and (2)
creates a record of such pixels. In the normal operating mode, the imaging system can use the record to
compensate for the missing or incorrect data from these defective pixels during real-time image processing.
The present invention simplifies testing of imaging systems and/or image sensors. It also increases
manufacturing yield and, therefore, results in lower per-unit manufacturing cost.

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